

Here is a list of 48 chemicals used in making paper

which are used for Pulping, Bleaching, Sizing, Strengthening, Fillers, Retention, Coating, etc

Name	Formal name	Chemical code	Used for
Raw wood pulp has these components ...			
1 Woodchip	Cellulose, organic molecule of hydrogen bonds	Cellulose	component of raw wood pulp
2 Woodchip	Hemicellulose, mainly galactoglucomannan and contains small amounts of xylan	Hemicellulose	component of raw wood pulp
3 Woodchip	Lignin	(C ₃₁ H ₃₄ O ₁₁) _n	component of raw wood pulp
4 Woodchip	Extractives	Extractives	component of raw wood pulp
5 Woodchip	Proteins	PELP	component of raw wood pulp
6 Woodchip	Silicon dioxide	SiO ₂	component of raw wood pulp
7 Water		H ₂ O	component of raw wood pulp
Processing adds these ...			
8 alum	"sulfate of alumina"	Al ₂ (SO ₄) ₃ .18H ₂ O	For alkaline sizing along with rosin
9 albarine	"Natural Sulfate of Lime"	CaSO ₄ .2H ₂ O	building materials.
10 chlorine dioxide	chlorine dioxide	ClO ₂	pulp bleaching
11 chlorine	chlorine	Cl ₂	pulp bleaching
12 Dolomite	calcium Magnesium Carbonate	CaMg(CO ₃) ₂	Filler, Coating
13 DTPA	Diethylene Triamine Penta Acetate	C14H ₃₃ N ₃ O ₁₀	Used for chelation (removal of transition metals from pulp).
14 EDTA	Ethylene Diamine Tetra acetic Acid	C10H ₁₆ N ₂ O ₈	Used for chelation (removal of transition metals from pulp).
15 Enzyme		various	Used in Deinking
16 FSA	Formamidine Sulphuric Acid or Thiourea Dioxide	CH ₄ N ₂ SO ₂	Post Deinking bleaching
17 Guar gum	Natural Polymer	various	Dry Strength Additive
18 Gypsum (or Mineral White or Plaster)	Natural Sulfate of Lime	CaSO ₄ .2H ₂ O	Gypsum board
19 Hydrogen Peroxide	Hydrogen Peroxide	H ₂ O ₂	In Pulp Bleaching
20 Hypochlorous acid	Hypochlorous acid	HOCl	In Pulp Bleaching
21 Lime	Calcium Oxide	CaO	Alkaline Pulping Process Chemical Recovery, Bleaching
22 Limestone	Calcium Carbonate	CaCO ₃	To make Precipitated CaCO ₃ , is used as Filler and in Coating
23 Magnesium Bisulfite	Magnesium bisulfite	Mg(HSO ₃) ₂	Used in Sulfite pulping
24 Magnesite	Magnesium Carbonate	MgCO ₃ -100%	Filler for cigarette paper
25 Milk of Lime	Calcium Hydroxide	Ca(OH) ₂	For causticizing of green liquor
26 Milk of Magnesia	Magnesium Hydroxide	Mg(OH) ₂	
27 Oxygen	Oxygen	O ₂	In Pulp Bleaching
28 Ozone	Ozone	O ₃	In Pulp Bleaching
29 Rosin	Abietic Acid	C19H ₂₉ COOH	Sizing
30 Rosin Soap	Sodium Abietate	C19H ₂₉ COONa	Sizing
31 Salt Cake	Sodium sulfate	Na ₂ SO ₄ .10H ₂ O	Makeup chemical in sulfate pulping chemical recovery (Na ₂ SO ₄ . ---Na ₂ S)
32 Soap/ Fatty Acid		various	Deinking
33 Sodium Bisulfite	Sodium bisulfite	NaHSO ₃	Used in Sulfite pulping
34 Soda Ash	Sodium Carbonate	Na ₂ CO ₃	Makeup chemical in alkaline pulping chemical recovery (Na ₂ CO ₃ +Ca(OH) ₂ ---2NaOH+CaCO ₃)
35 Sodium Aluminate	Sodium aluminate	Na ₂ Al ₂ O ₄	Used in conjunction with alum to control pH
36 Sodium Bisulfite	Sodium bisulfite	NaHSO ₃	An acid type cooking liquor chemical component sometimes used to neutralized residual chlorine in the pulp during the bleaching process.
37 Sodium Chlorate	Sodium Chlorate	NaClO ₃	Used to generate Chlorine Dioxide
38 Sodium Dithionite	Sodium Hydrosulfite	Na ₂ S ₂ O ₄	Bleaching
39 Sodium Hypo-chlorite	Sodium hypochlorite	NaOCl	Bleaching
40 Sodium Peroxide	Sodium peroxide	Na ₂ O ₂	Bleaching
41 Sodium Silicate	Sodium Silicate	Na ₂ SiO ₃	In waste paper deinking for wetting, peptization, ink dispersion, peroxide stabilization.
42 Sodium Sulfide	Sodium sulfide	Na ₂ S	Active chemical in kraft/sulfate cooking liquor
43 Sodium Thiosulfate	Sodium thiosulfate	Na ₂ S ₂ O ₃	Bleaching
44 Sodium tripolyphosphate	Sodium tripolyphosphate	Na ₅ P ₃ O ₁₀	Dispersant
45 Starch	Consists of glucose units linked together by oxygen bridges called glycosides		Wet and dry end additive
46 Sulfur	Sulfur	S	To make HSO ₃ f or bi-sulfite pulping
47 Surfactants		various	Used in deinking. Used as debonders in fluff pulp manufacture.
48 Titania	Titanium Dioxide	TiO ₂	Filler to increase the opacity and brightness of paper. Used in coating.
49 Anatase	Titanium Dioxide	TiO ₂	